

## Curriculum Vitae



Name: Prof. Dr. Mohamed Alkhuzamy Aziz, B.A., M.Sc., PhD.Sc.  
Former Dean of the Faculty of Social and Human Sciences,  
Galala University, Egypt  
Ex-Vice Dean for Graduate Studies & Research, Fayoum University.  
Full Professor of Geo-Informatics (GIS) & GeoAI  
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### Education:

- Ph.D. Sc. in Basic Sciences (Cartography), University of Vienna, Austria, 1987
- M.Sc. in Basic Sciences (Cartography), University of Vienna, Austria, 1985
- B.A. in Geography (Cartography), University of Elminya, Egypt, 1978

**Languages:** German, English and Arabic

**Nationality:** Egyptian/Austrian

### Patent:

Registered the National Patent entitled: "A Smart Solution for the Census, Egypt 2016," registered under no 2119/2012, Ministry of Scientific Research, Cairo.

### Scientific Prize and Awards:

- 1) Received First Prize in the 8th Prize of Sheikh Rashed Bin Hemeed for Scientific Research, Ajman, UAE, 1991 with a paper entitled: "GIS-Technology and its Uses for Data Collection in the Field of Environmental Pollution in the Gulf Area."
- 2) Award of Excellence for International Publishing Research, Fayoum University, for the years: 2014, 2018, 2021, and 2022.

### Positions:

- Dean of the Faculty of Social and Human Sciences, Galala University, Egypt, November 2020 – August 2022.
- Vice Dean for Graduate Studies & Research, September 2012- August 2016.
- Chairperson of the GIS Unit of Excellence, Fayoum University, October 2016-August 2018.
- Member of the Scientific Promotion Committee for Geography, Supreme Council for Egyptian Universities, August 2013 - August 2019.
- Member of the Scientific Promotion Committee for Geography, Alazhar University since 2016.
- Fellow of the Scientific academy, Ministry of Scientific Research, since 2016.
- Coordinator of Human Development Report for Fayoum Governorate, Egypt, 2012-2014.
- Director of the Quality Assurance Office, Faculty of Arts, Fayoum University, Egypt, March - October 2012.
- Member of Supreme Committee of Research and Consultation Center, Fayoum University, Egypt, March 2012 - June 2016.

- Holder of the Distinction of UNIGIS International Fellow since 2006 as the sixth worldwide.
- Director of Master program in Applied Geosciences & GIS, Kuwait University, 2007-2010.
- College General Coordinator for the New University Campus, Kuwait University, 2008-2010.
- Founder and President of Alkhuzamy Charity Foundation for Orphans, Egypt, since 2009 ([www.alkhuzamy.org](http://www.alkhuzamy.org))

#### **Academic Experience:**

- Full Professor of Applied GeoInformatics (GIS), Fayoum University, Since November 2011.
- Full Professor of Applied GeoInformatics (GIS), Kuwait University, January 2005 - June 2011.
- Associate Professor, Kuwait University (1999-2005).
- Adjunct GIS Professor, College of Computers and Informatics, Zagazig University, Egypt, 2006-2010.
- Associate Professor, King Saud University, Riyadh (1998-1999).
- Assistant Professor, King Saud University, Riyadh (1996-1998).
- Assistant Professor, Qatar University, Doha (1989-1996).
- University Assistant, Salzburg University, Salzburg, Austria (1987-1989).

#### **Visiting Professor:**

- 10 - 15 February 2009: Visited the Free University of Berlin.
- 27 Jan. - 3. Feb 2008: University of Wuerzburg, Geography Dept., Germany, and held 4 Lecturers on GIS and its Applications in the Arab World.
- 4-10 December 2002: Visited the Arab Authority of Agricultural Development and Investment in Sudan as a GIS Consultant.
- 25-28 January 1998: Visited the University of Greifswald, Geography Dept., Germany, for three days and gave a lecture on Cartography & GIS.
- 1-25 August 1994: Visited the King Fahad University, Research Centre to establish a GIS Lab and advise them in structuring a national Atlas for Saudi Arabia.
- July 1994: Visited the University of Paderborn in Germany to give a lecture on Teaching Cartography and GIS at the University of Qatar.
- July 1994: Visited the University of Nuernburg in Germany to give a lecture on Mapping and Remote Sensing in Qatar.
- July 1994: Visited the University of Wuerzburg, Germany to give a lecture on Mapping and GIS in the State of Qatar and supervise a seminar on the Regional Development of Doha City.

#### **Skills:**

- Proficient in GIS software (ArcGIS, QGIS, etc.) and related tools.
- Strong background in cartography and spatial analysis.
- Excellent research and analytical skills.
- Experience in teaching and mentoring students.

- Strong leadership and management abilities.
- Fluent in Arabic, English, and German.

### **Consultations:**

- GIS Consultant in the Office of Vice President for Planning, Kuwait University, June 2009 - June 2011.
- GIS Consultant of the Ministry of Finance, Kuwait, 2008 - 2011.
- GIS Consultant of the New University Campus of Kuwait University (November 2004 – 2011).
- GIS consultant for the Higher Council of Planning and Development of Kuwait, Ministry of Planning (October 2003 - May 2004).
- GIS Consultant of the Urban and Environmental Dept., KISR, Kuwait (January – March 2003).
- GIS Consultant of the Arab Authority of Agricultural Development and Investment, Sudan, December 1st - 8, 2002.
- GIS Consultant of The Environmental Protection Authority (EPA), Kuwait (May 2001 - January 2002).
- Founder & Consultant of the GIS National Steering Committee of the State of Kuwait, since December 29, 2001.

### **Lab Experience:**

- Designed the National GIS Center for the State of Kuwait (January 2002).
- Established the National GIS Steering Committee of the State of Kuwait (January 2002).
- Established the GIS and Remote Sensing Lab at the Geography Dept., Kuwait University (March 2000).
- Designed the GIS System for the Municipality of Riyadh, Saudi Arabia (October 1998).
- Established the GIS and Remote Sensing Lab at the Geography Dept., King Saud University in Riyadh, Saudi Arabia (February 1997).
- Established the GIS Unit at the University of Qatar as a Subsystem to the National GIS Center, State of Qatar (April 1991).
- Established the GIS Lab at the Geography Dept., University of Qatar (May 1990).
- Established the Lab of Computer Cartography and Remote Sensing, Institute of System Analysis, Salzburg University, Austria (March 1988).

### **Curriculums Developed:**

- Prepared the accreditation File of Geography Department, Kuwait University, 2009.
- A Minor of GIS and RS for all students at Kuwait University, offered by Geography Dept., 2007-2008.
- M.Sc. of Applied Geosciences & GIS, a joint program between Geography & Geology at Kuwait University, 2004-2005.
- B.A. of Urban Planning & GIS for Geography Dept., Kuwait University, 2002-2003.
- PhD program on Cartography & GIS for the Geography Dept., King Saud University, Saudi Arabia, 1997-1998.
- M.A. program on Cartography & GIS for the Geography Dept., King Saud University, Saudi Arabia, 1997-1998.

- B.A. program on Cartography & GIS for the Geography Dept., King Saud University, Saudi Arabia, 1997-1998.
- B.A. program on Urban Planning for the Geography Dept., Qatar University, 1995-1996.
- M.A. program on Urban Planning for the Geography Dept., Qatar University, 1995-1996.
- Diploma on GIS for the College of Technology, Qatar University, 1994-1995.
- Re-qualification Program on GIS & Remote Sensing, Salzburg University, Austria, 1988-1989.

#### **Certificates of Teaching Excellence:**

- Academic Accreditation of the Colleges of Arts and Social Sciences, by Prof. Charles Betrouth, March 18-21, 2006.
- Strategy of Active Learning at the University, by Dr. Ahmed Sultan, December 18, 2005.
- Assessment I: Connecting Student Learning and Assessment, presented by Prof. Spencer Benson, University of Maryland, USA, Director of the Center for Teaching Excellence, May 3, 2005.
- Assessment II, Making Assessment Meaningful and Authentic, presented by Spencer Benson, University of Maryland, USA, Director of the Center for Teaching Excellence, May 3, 2005.
- E-Learning I, Define the Needs for success in E-Learning, presented by Prof. Spencer Benson, University of Maryland, USA, Director of the Center for Teaching Excellence, May 1, 2005.
- Promoting Active Learning in the University Classroom I, presented by Prof. James Eison, University of South Florida, USA, May 1, 2005.
- Knowing Our Students, presented by Prof. Thomas Angelo, May 9, 2004.
- Teaching for Learning, presented by Prof. Thomas Angelo, May 10, 2004.
- Assignments for Learning, presented by Prof. Thomas Angelo, May 11, 2004.

#### **Training Courses at Ain Shams University in cooperation with Galala University 2021:**

- Competitive Research Proposals.
- Constructive Assessment for Learning.
- Global University Ranking and Indicators.
- International Network in Higher Education.
- Quality and Impact Research.
- Research Management.
- Strategic Planning.
- Effective ICT Policies in managing E-Learning.
- Effective Communication Skills.
- Constructive Assessment for E-Learning.

#### **Membership of Scientific Organizations:**

- Austrian Geographic Society since 1987.
- Egyptian Geographic Society since 1988.
- Saudi Geographic Society since 1996.
- Kuwaiti Geographic Society since 1999.
- Arabian Gulf Geographic Society since 2002.

- Indian Geographic Society since 2020.

#### **Scientific Reviewer for Journals and Promotions:**

- Egyptian Journal of Remote Sensing, NARSS since 2011.
- Annual Conference of Geo-Informatics, Salzburg University since 2007.
- Journal of Saudi geographical Society, since 1996.
- Journal of Kuwaiti Geographical Society, since 1999.
- Journal of Egyptian Geographical Society since 2011.
- Journal of Gulf and Arabian Peninsula Studies, Kuwait University since 1999.
- Journal of Social Sciences, Kuwait University, since 2000.
- Journal of the Arab World Geographers, Canada, since 2001.
- Promotion Council at King Khaled University, Abha since 2008.
- Promotion Council at King Abdulaziz University, Jeddah since 2003.
- Promotion Council at King Saud University, Riyadh, since 2010.
- Promotion Council at Basrah University, Iraq since 2012.
- Promotion Council at Jordan University since 2010.
- Promotion Committee of Geography, Egypt since September 2013.

#### **Conference Leadership:**

- Conference Coordinator of the 4th International Conference of the College of Social Sciences, Kuwait University, held on 13-15 December 2010, Kuwait.
- Member of the Scientific Committee of the 1st PetroGIS Conference, Bahrain, 24-26 March 2009.
- Member of the Scientific and Higher Organizing Committee of the first Regional Conference on Land degradation, Kuwait University, 14-20 March 2009.
- Member of the Scientific Committee of the GI-Forum, held at Salzburg University, 1-4 July 2008.
- Conference Coordinator of the 5th Arab Geographer Conference, held on 1-3 March 2009, Kuwait.
- Member of the Scientific Committee of the GI-Forum, held at Salzburg University, 3-5 July 2007.
- Conference Coordinator of the 3rd International Conference of Social Sciences, Kuwait University, 3-5 December 2006.
- Member of the higher organizing committee of the 3rd International Conference of Social Sciences, Kuwait University, 3-5 December 2006.
- Member of the scientific committee of the 6th Arab GIS Conference, Arab Map 2005, Cairo, Egypt (11-13 September 2005).
- Member of the higher organizing committee & the scientific committee of the Kuwait 1st International Remote Sensing Conference, (26-28 September 2005).
- Member of the scientific committee of the First Gulf Conference on Environment and Development (3-5 December 2005).
- Member of the higher organizing committee of the Kuwait 1st International GIS Conference, (5-7 February 2005).
- Chairman of the scientific committee of the 1st Kuwait International GIS Conference, (5-7 February 2005).

- Member of the higher organizing committee of the Second International Conference on Social Sciences, Kuwait University, (6-8 April 2003).
- Chairman of the Information & Media Committee of the Second International Conference on Social Sciences, Kuwait University, (6-8 April 2003).
- Member of the higher organizing committee of the First International Conference on Social Sciences, Kuwait University, (10-12 April 2001).
- Chairman of the Information & Media Committee of the Second International Conference on Social Sciences, Kuwait University, (10-12 April 2001).

### **Research Interests:**

Applied Research of GIS and Remote Sensing in these fields of specification:

- Environmental Planning.
- Urban Planning.
- Applied Geomorphology.
- Industrial Planning.
- Public Health and other Urban services.
- Digital Cartography and Map Updating.
- Mobile Mapping and GPS.
- Marine and Land Environment.
- Demographic Planning.

### **Taught Courses:**

#### 1) Undergraduate Courses

- Introduction to Basic Cartography
- Thematic Cartography
- Urban and Regional Planning
- Computer Application in Geography & Urban Planning
- Introduction to Surveying for Geographers
- Geography of Man and Environment
- Photogrammetry and Remote Sensing
- Geographic Information Systems (GIS)
- Applied GIS and Project Implementation
- Geodatabase Design and Modeling in GIS
- Mobile Mapping & GPS
- Remote Sensing

#### 2) Graduate Courses

- Computer Cartography & Remote Sensing
- Introduction to Geographic Information Systems
- Advanced Remote Sensing & GIS
- GIS Application

#### 3) Training Courses for Community Service:

- Introduction to GIS for EPA Employees, 2001, Kuwait.
- Spatial Analysis and Remote Sensing for EPA Employees, 2002, Kuwait.

- Introduction to GIS for KISR Employees, 2003, Kuwait.
- Introduction to GIS for Ministry of Finance, 2007, Kuwait.

#### 4) International Teaching Activities:

- February 2001: Taught an oriented GIS Course in the field of Environmental Planning for a delegation from GCC countries in cooperation with KISR-Kuwait.
- January 2001: Taught an intensive GIS Course for the graduate Geography students in Kuwait (60 hours).
- November 2000: Taught an oriented GIS Course for a delegation from the Kuwaiti Environmental Authority.
- March 2000: Taught an oriented GIS Course for a delegation from different governmental agencies in Kuwait in cooperation with the College of Engineering and Petroleum, Kuwait University.
- April 1998: Taught an oriented GIS Course at King Saud University for a delegation from the Naef Academy for Security Studies, Saudi Arabia.
- March - May 1996: Taught an oriented GIS Course at the University of Qatar for researchers from its Geology Dept. using ARC/INFO.
- 7-12 January 1995: Taught an intensive Course at the University of Qatar for a delegation from the United Nations-ESCWA on "GIS and its using in Statistics Agencies".
- 23-27 April 1994: Taught an intensive Course at the King Fahed University of Petroleum & Minerals on "Computer Aided Planning & GIS".

#### Supervised Thesis:

1. PhD Thesis entitled: "Integration of GIS and Spatial Statistics: An Applied Study on the Health Management System of Kuwait City", Huda Al-Helal, local supervision in cooperation with Twente University, The Netherlands, 2002-2005.
2. Master Thesis entitled: "Environmental Changes of Kuwait Bay Using GIS & RS", Mohamed Al-Harbi, local supervision in cooperation with Arabian Gulf University in Bahrain, still under supervision since 2004.
3. Master Thesis entitled: "City AlSubiyah – Kuwait, Design and Planning of a New Town Using GIS", Ali Announce, local supervision in cooperation with Stockholm University, 2001.
4. Master Thesis entitled: "Saudi Topographic Map 1:50.00 Cartographic Analysis of the Sympology Structure and Interpretation Aspects", Mohamed Dukhail, King Saud University, 1999.
5. Master Thesis entitled: "Automated Map Updating of the Saudi Topographic Map 1:50.000 Using GIS and RS", Noura Al-Shemrani, King Saud University, 1998.
6. Master Thesis entitled: "Recent Techniques in Knowledge Acquisition", Ayman Mostafa, Zagazig University, Faculty of Computers and Informatics, 2006-2008.
7. Master Thesis entitled: "Recent Development Techniques in Fuzzy Expert Systems", Essam Sulaiman, Zagazig University, Faculty of Computers and Informatics (2006-2009).
8. Master Thesis entitled: "Mining Association Rules in Relational Database: Partitioned and Incremental Approaches", Nora Zaki, Zagazig University, Faculty of Computers and Informatics (2006-2010).

9. Master Thesis entitled: "On Heuristics of Query Optimization", Asmaa Ahmed, Zagazig University, Faculty of Computers and Informatics (2006-2010).
10. Master Thesis entitled: "Intelligent Search Technique in Expert Database Systems", Amira Mohamed, Zagazig University, Faculty of Computers and Informatics (2006-2011).
11. PhD thesis: Kamel Fathi Gomaa: "Environmental Assessment and Modelling of Urban Development for the Urban of El Minya Governorate", A study in Urban Geography using Remote Sensing and Geographical Information Systems.
12. MA thesis: Duaa Mohamed Nageeb: "Geographical distribution of fish populations in the Egyptian territorial waters in the Red Sea using Remote Sensing and GIS".
13. MA thesis: Sara Ezzat Abd El Salam: "Urban Development in Damietta Governorate: A study in Urban Geography and Geo-Informatics".
14. PhD Thesis: Islam Mohamed Ramadan: "Develop a Smart Information Model for Optimal Distribution of Urban Social Services: Applied Study on the City of Ismailia".
15. MA Thesis: Mohamed Shamroukh Mohamed: "Developing a Smart Automated GIS Map for the Public Services in Qena City".

#### **External Examiner of Thesis:**

- Master Thesis of Yasser Makki, GIS Application on Fish Management and Resources in Bahrain, Arabian Gulf University, Bahrain, 23 November 2006.
- Master Thesis of Wafaa Hussain, GIS Application on Groundwater of Rawdateen and Umm Al-Aeesh in Kuwait, Dept. of Earth and Environmental Sciences, College of Science, Kuwait University, 5 December 2005.
- Master Thesis of Dina Mohamed, Spatial Analysis of Political parties in Dakahlia Governorate, Egypt, April 2013.

#### **International Conferences & Symposiums:**

1. 5 - 7 July 1989: GIS Symposium at Salzburg University with a paper on Cartographic Requirements of the Qualification of GIS Analyst.
2. 19 - 23 March 1990: Symposium for Environmental Studies at Al Ain University, U.A.E., with a paper on Capturing Environmental Data in the Gulf Region Using GIS.
3. 4 - 6 July 1990: GIS Symposium at Salzburg University with a paper on The Status of GIS Qualification in the Middle East.
4. 16 - 20 March 1991: Symposium for Geographical & Environmental Studies at Al Ain University, U.A.E., with a paper on Cartographic Elements of the Gulf Environmental Information Systems.
5. 26 - 28 June 1991: Conference on GIS & Cartography at Vienna University as a participant.
6. 3 - 5 July 1991: GIS Symposium at Salzburg University as a participant.
7. 18 - 21 January 1992: International Conference on GIS in Doha, Qatar, with two papers on GIS Education & Research at Qatar University.
8. 22 - 24 July 1992: International Conference on GIS Applications in Surveying Engineering, University of Ottawa, Canada, as a participant.
9. 23 - 25 June 1993: Attended a Symposium on GIS & Multimedia at Vienna University as a participant.
10. 7 - 9 July 1993: Attended the GIS Symposium at Salzburg University as a participant.

11. 6 - 8 July 1994: Attended the GIS Symposium at Salzburg University with a paper on The Structure of the GIS Teaching Program at Qatar University.
12. 14 - 17 March 1995: Attended an international Conference on GIS and its Uses in Statistics, Cairo University, and gave a workshop in cooperation with UN-ESCWA on The Usage of GIS in the Statistical Authorities of ESCWA.
13. 5 - 7 July 1995: Attended the GIS Symposium at Salzburg University as a participant.
14. 2- 4 March 1999: Attended the Saudi-Symposium for Geography at King Abdullaziz in Jeddah and presented a paper on The Spatial Relation of the Topographic Structure and Urban Development of Deriyah in Saudi Arabia.
15. 12-14 April 2001: Attended the First International Conference for Social Sciences and presented a paper on Modeling of Urban Land-Use of Batha Municipality in Riyadh Using GIS.
16. 21-23 April 2001: Attended the First International Conference of the Martyr's Bureau – Kuwait and presented a paper on The Usage of the Information Systems in Governmental Authorities in Kuwait.
17. 7-9 October 2001: Attended the Euro-Arab Geographer Conference in Malta and presented a paper on Cartographic Modeling of Urban Development of Kuwait Using GIS.
18. 28-29 April 2002: Attended the First GIS Regional Conference in Cairo and presented a paper on Establishment of the National GIS Center of Kuwait.
19. 8-13 September 2002: Attended the First International Conference of the Middle East Studies at the University of Mainz, Germany, and presented a paper on The Optimization of the Urban Land-use of Failaka Island in Kuwait.
20. 5-8 May 2003: Attended the Second GIS Regional Conference in Cairo and presented a paper on Design of the National GIS Database of Kuwait.
21. 24-26 October 2003: Attended the Third Conference of the Arab Geographers in Riyadh and presented a paper and conducted a workshop on Cartographic Modeling of Historical Urban Development of Mekka Al-Mukaramah.
22. 5-7 September 2004: Attended the Fifth Arab Conference on GIS, Cairo, and presented a paper on Integration of GIS e-Government in Kuwait.
23. 27-29 September 2004: Attended the Third International GIS Conference in Bahrain and presented a paper on GIS Qualification Levels at Kuwait University.
24. 11-13 September 2005: Attended the Sixth Arab Conference on GIS, Cairo, and presented a paper on The Structure of a New Master Degree on Applied Geosciences and GIS at Kuwait University.
25. 3-5 December 2005: Attended the First Gulf Conference on Environment and Development in Kuwait and presented a paper on the Application of Remote Sensing on the Mapping of the Dynamic Soil Salinity in Wafra Farms in Kuwait.
26. 1-6 November 2006: Attended the 4th Conference of the Arab Geographers at Muhammad IV University, Rabat, Morocco, and presented a paper on Spatial mapping of the Urban Settlements in the Failaka Island vor dem 20 century using GIS & GPS.
27. 11-13 March 2007: Attended the 2nd Conference of the GCC Geographical Society in Kuwait and presented a paper on GIS Spatial Analysis of the Groundwater characteristics of Sulybia Aquire, Symposium of Water Resources, GCC Geographic Society, Kuwait University.

28. 17 June 2007: Attended the Annual World Day of Desertification organized by KISR, Kuwait, and presented a paper on Using Geoinformatics in detecting and forecasting the desertification ratio in Abdali Farm, Kuwait.

#### **List of Publications:**

1. Aziz, M. (1989): Cartographic Requirements for the Qualification of GIS Analysts. Presented at the GIS Symposium, Salzburg University. Published in Symposium's Volume No. 13, 1989, pp. 145-156. (German)
2. Aziz, M. (1990a): GIS Technology and its Use for Data Collection in the Field of Environmental Pollution in the Gulf Area. Presented at the Symposium of Environmental Protection, University of U.A.E., 1990. Awarded the first scientific prize in the 8th prize of Sheikh Rashed Bin Hemeed for Scientific Research, 1991. Published in a special volume, Ajman, 1992.
3. Aziz, M. (1990b): Applications of GIS Technology in the Arab Countries Today with a Case Study in the Gulf State of Qatar. Presented at the GIS Symposium, Salzburg University. Published in Symposium's Volume No. 15, 1990, pp. 181-189. (German)
4. Aziz, M. (1992): Computer Application in Geography. Journal of the Center for Documentation and Human Research, Qatar University, 1992, vol. 4, pp. 307-334.
5. Aziz, M. (1993): GIS Technology and its Use in City Planning. Journal of the Kuwait Geographers Society, Kuwait University, Vol. 156, 1993, pp. 1-60.
6. Aziz, M. (1994a): Remote Sensing Technology and its Uses in City Planning. Journal of the College of Social Sciences, Qatar University, 1994, Vol. 16, pp. 353-384.
7. Aziz, M. (1994b): Structure of the GIS Teaching Program at Qatar University. Presented at the GIS Symposium, University of Salzburg, 1994. Published in Symposium's Volume No. 21, pp. 29-37.
8. Aziz, M. (1995a): Geographic Information Systems - Studies on their Definitions and Historical Background. Journal of the Egyptian Society of Arab Geographers, 1995, pp. 245-285.
9. Aziz, M. (1995b): Mapping and Geographic Information Systems in the State of Qatar - A Survey and Classification Study. Journal of the Center for Documentation and Humanitarian Research at Qatar University, 1994, Vol. 6, pp. 255-288.
10. Aziz, M. (1995c): The Use of GIS in the Field of Electricity Services in Kuwait City - Field Examples. Published in the Volume of the Third International Symposium on GIS and its Applications, King Abdulaziz University, Jeddah, Saudi Arabia, March 1995.
11. Aziz, M. (1995): Geographic Information Systems and Rehabilitation Plans - A Case Study: Qatar University. Journal of the GIS and Statistics Symposium, Cairo University, 1995, 45 pages.
12. Aziz, M. (1997a): Tourism Geography in Qatar - Its Factors and Economy. Journal of the Center for Documentation and Human Research, Qatar University, 1997.
13. Aziz, M. (1997b): Usage of GIS in the Land-use Structure of Doha Industrial Area. Arabian Journal, Egyptian Geographical Society, Cairo, 2nd Part, 1997, pp. 119-166.
14. Aziz, M. (1999): Qualification and Research in Cartography and GIS - Concepts and Implementation in 2000. The Bulletin of Geography, Dept. Vienna University, March 1999.

15. Aziz, M. (2000a): Applied Integration of GIS and Remote Sensing in the Relationship between Horizontal Urbanization Growth and Geographical Aspects of Diriyah City. Journal of the Kuwait Geographers Association, August 2000.
16. Aziz, M. (2000b): Applied Integration of GIS and Geomatics in Updating the Specographic Map of the Kingdom of Saudi Arabia at a Scale of 1:100.000 - A Case Study Najd Paper 4. Journal of the Egyptian Geographers Association, Part I, 2000, pp. 157-190. Cairo.
17. Aziz, M. (2001a): Development of Functional Structure of Cities in Small Gulf Countries - A Cartographic Case Study of Kuwait. PGM, 2, 2001, pp. 30-39, Germany.
18. Aziz, M. (2001b): Application of GIS in Shuwaikh Industrial Area 2. Kuwait University Journal of Social Sciences, Vol. 2, 2001.
19. Aziz, M. (2001c): Demographic Analysis of Workers in Shuwaikh Industrial Area, Kuwait Using GIS. Journal of the Faculty of Arts, Menoufia University, Egypt, 2001.
20. Al-Qarni, A. and Aziz, M. (2001): Applied Integration of Satellite Positioning Systems (GPS), GIS, Remote Sensing, and Digital Photometry to Update the Geographical Map of the Kingdom of Saudi Arabia at a Scale of 1:50.000. Joint Research conducted at the Center for Gulf Studies, Kuwait University, 2001, Vol. 15.
21. Aziz, M. (2001c): GIS Application in Environmental Planning in Kuwait: A Case Study of Waste Management. Journal of the Arab World Geographer, University of Toronto, 2001, 4.
22. Aziz, M. (2001d): Modeling an Automated Geographic Drawing for Urban Development in Kuwait. Journal of the Kuwait Geographers Society, Kuwait University, 2001, No. 257.
23. Aziz, M. (2001 AH): Cartographic Hydrographic Characteristics of the Valley of Al-Awl Reserve in Hotat Bani Tamim, Kingdom of Saudi Arabia: An Applied Study Using GIS and Remote Sensing. Minia University Journal, October 2001.
24. Al-Hurra, A. and Aziz, M. (2001): GIS Application in Infrastructure Planning: A Study of the Relationship between Home Types and Educational Services in Al-Batha Municipality, Riyadh, Saudi Arabia. Journal of Gulf Studies, November 2001.
25. Aziz, M. (2002): The Effect of Spatial Differences on the Ability to Separate Plants from Soil in Satellite Images: An Applied Graphical Study on Five Samples from Kuwait. Journal of the Faculty of Arts, Alexandria University, Damanhour Branch, 2002, pp. 37-110.
26. Al-Zahir, A. and Aziz, M. (2003): Spatial Analysis of the Urban Transport Network in Kuwait Using GIS. Damascus University Journal for Social Sciences and Humanities, May 2003.
27. Aziz, M. (2004a): Application of Automated Graphic Modeling in Documenting the Urban Development of Makkah Al-Mukarramah before the 14th Century AH. Journal of the Faculty of Arts, Alexandria University, Damanhour Branch, April 2004.
28. Aziz, M. (2004b): The Optimum Urban Land-Use of Failaka Island in Kuwait: An Applied Study Using GIS and Remote Sensing. Journal of the Egyptian Geographic Society, June 2004.
29. Aziz, M. (2004c): Design of the National Geodatabase of Kuwait. Journal of Geography and Cartography, Geography Department, Vienna University, Vol. 15, October 2004.

30. Alali, J. and Aziz, M. (2006a): Application of Remote Sensing in Detecting the Dynamic Movements of Soil Salinity Phenomena in Al-Wafra Farms, Kuwait. Bulletin of the Egyptian Geographical Society, Cairo, February 2006.
31. Al-Ali, J. and Aziz, M. (2006b): Cartographic Phenomenon of Desertification in Wafra Farms, Kuwait, Using Geographic Information Systems and Remote Sensing. Journal of Minia University in Egypt, March 2006.
32. Aziz, M.M. (2006c): Stadtentwicklung in Kuwait: Kartographische Analyse. Wuerzburger Geographische Manuskripte, Sonderheft 9, pp. 53-75, Geography Institute, Wuerzburger University, Germany, October 2006.
33. Aziz, M.M. (2006d): Flächennutzungspläne für die Stadt Kuwait: Eine räumliche Analyse mit GIS. Wuerzburger Geographische Manuskripte, Sonderheft 9, pp. 101-107, Geography Institute, Wuerzburger University, Germany, October 2006.
34. Aziz, M., Alzahr, A., and Alotaibi, O. (2007a): Spatial Mapping of Urban Settlements in Failaka Island before the 20th Century Using GIS and GPS. Arab World Geographer Journal, Akron University, October 2007.
35. Aziz, M. (2007c): GIS Application in the Sabhan Industrial Area, Kuwait. Egyptian Geographical Journal, September 2007.
36. Aziz, M., Walkandari, A. (2008): The Use of Geographic Information Technologies in Monitoring and Combating the Decline of Agricultural Areas in Abdali Farms, Kuwait. Journal of Arab GIS, Saudi Geographical Society, Riyadh, 2008.
37. Alzahr, A., Alotaibi, O., and Aziz, M. (2008): GIS Application in Demographic Characteristics of Workforce in Sabhan Area, Kuwait. Journal of the Egyptian Geographical Society, Cairo, English Edition, 2008.
38. Aziz, M.M. (2008a): Stadtentwicklung Kuwait – Dargestellt mit GIS. Sonderheft, University of Wuerzburg, Germany.
39. Aziz, M.M. (2008b): GIS-Anwendung in den Trockengebieten der Arabischen Welt. Sonderheft, University of Wuerzburg, Germany.
40. Aziz, M. (2008c): Remote Sensing and Strategy for Regional Geography of the State of Kuwait and its Islands in the Gulf. Tuesday, Special Issue, University of Wuerzburg, Germany.
41. Aziz, M.: Analysis of Regional Development Using GIS: Examples from the Arab World. Wednesday, Special Issue, University of Wuerzburg, Germany.
42. Aziz, M. (2013): GIS Science: Historical Background, Foundations, and Methods. Journal of the Egyptian Geographers Association, January 2013, Vol. 1.
43. Aziz, M. (2014): Applying Built-up Index to Analyze Urban Expansion in Fayoum Governorate. Journal of the Egyptian Geographical Society, English Edition, June 2014.
44. Aziz, M. and Alali, J. (2014): Producing the Desertification Sensitivity Map of Kuwait: A GIS Modeling Application. Journal of the Egyptian Geographical Society, English Edition, June 2014.
45. Aziz, M. et al. (2018): Applications of GIS in Measuring Trends in Urban Growth Development in Luxor City during the Period 1891-2017. Journal of the Faculty of Arts, Minia University, p. 1.
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#### **Books:**

1. Aziz, M. (1992): GIS Glossary, published by Dar Al-Haqiqa International Information. This comprehensive glossary covers key terms and concepts in Geographic Information Systems (GIS) in both English and Arabic. It consists of 188 pages and serves as a valuable reference for professionals and students in the field.
2. Aziz, M. (1996): Applications of Geographic Information Systems and Government Statistics, Practical Materials, published under a special agreement with the United Nations - ESCWA. This book, spanning 553 pages, explores the practical applications of GIS in conjunction with government statistics. It provides insights into how GIS can be utilized to analyze and visualize data for informed decision-making.
3. Aziz, M. (1998): Geographic Information Systems: Its Foundations and Applications in Geography, published by the Knowledge Foundation. This textbook, available in Arabic, delves into the foundations and applications of GIS in the field of geography. The first

edition was released in 1998, followed by a second edition in 2000 and a third edition in 2004.

4. Al-Sabah, A., Aziz, M., and Mahmoud, E. (2003): Atlas of Schools of Geography and History for Kuwaiti Secondary Schools, published by Manshaet Al-Maaref. This atlas, with a second edition released in 2006 in Kuwait, is specifically designed for Kuwaiti secondary schools. It offers comprehensive maps and information pertaining to geography and history, providing valuable educational resources.
5. Abu Al-Enein, H., Aziz, M. et al. (2006): Human Geography and the Environment, published by the Department of Geography, Kuwait University. This book, initially released in 2006 and followed by a second edition in 2007, explores the relationship between human activities and the environment. It offers insights into various aspects of human geography, providing a comprehensive perspective.
6. Al-Moussa, A. and Aziz, M. (2007): Geography of Kuwait and Germany, published jointly by Kuwait University and the University of Würzburg, Germany. This book, written in German, focuses on the geography of Kuwait and Germany, highlighting the similarities and differences between these two regions.
7. Aziz, M. (2007): Applied Studies in Geographic Information Systems, published by Dar Al-Ilm Publishing. This extensive publication, spanning 553 pages, covers applied studies in GIS. It offers practical examples and case studies, providing readers with valuable insights into the real-world applications of GIS technology.
8. Aziz, M. and Shafi, M. (2008): Introduction to Maps and Machine Maps, a textbook published by Dar Al-Ilm. This book serves as an introductory guide to maps and machine maps. It covers fundamental concepts and techniques related to map production and interpretation.
9. Aziz, M. (ed.) (2007): Editor of three volumes of the Third International Conference on Social Sciences, held at Kuwait University in December 2007. These three volumes, totaling 1700 pages, contain a collection of research papers presented at the conference. The publications cover a wide range of topics within the field of social sciences.
10. Aziz, M. (ed.) (2009): Volume of the Fifth Conference of the Arab Geographers Society, published by the Kuwait Society of Geographers. This volume, comprising 900 pages, documents the proceedings of the Fifth Conference of the Arab Geographers Society. It includes research papers and discussions on various geographical topics relevant to the Arab world.
11. Aziz, M. (2013): "Thematic Maps: Foundations and Automated Applications". This book, published by Manshaet Al Maaref Publishing House in Alexandria, focuses on the foundations and automated applications of thematic mapping. It explores the theory and techniques behind thematic mapping and its practical implementation.
12. Aziz, M. (2015): Geography of Environment and Development, published by the Arab Bureau for Publishing and Distribution in Cairo. This book provides an in-depth exploration of the interplay between geography, environment, and development. It examines the environmental challenges faced by different regions and offers insights into sustainable development practices.
13. Aziz, M. (2016): Geography of the Arab World, published by the Arab Bureau for Publishing and Distribution in Cairo. This comprehensive book delves into the geography of the Arab world, covering its physical and human aspects. It provides a deep understanding of the region's diverse landscapes, cultures, and socio-economic factors.

14. Aziz, M. (2017): Principles of Cartography, published by the Arab Bureau for Publishing and Distribution in Cairo. This book serves as a guide to the principles of cartography, covering topics such as map design, symbolization, and map projections. It offers a solid foundation for those interested in the art and science of mapmaking.
15. Aziz, M. (2017): Selected Readings in Physical Geography. This English textbook for geography students, published by Elmaktab ElArabi in Cairo. It features a selection of readings focused on physical geography. The book provides a comprehensive overview of various topics within the field, offering students a valuable resource for studying and understanding physical geography.
16. Aziz, M. (2017): Selected Readings in Human Geography. This English textbook, also published by Elmaktab ElArabi in Cairo, is tailored for geography students. It presents a collection of readings that delve into the realm of human geography. Covering a wide range of subjects, the book offers insights into the social, cultural, economic, and political aspects of human geography.